

REMARKS

Entry of the foregoing and further and favorable consideration of the subject application, pursuant to and consistent with 37 C.F.R. § 1.114, is respectfully requested and such action is earnestly solicited.

As correctly stated in the Official Action, Claims 1-7, 16-22, 29, 30, and 34-37 are pending in the present application. Claims 1-7, 16-22, 29, 30, and 34-37 stand rejected.

By the present amendment, Claims 1 and 35 have been amended to recite that the polyethene used is 100% polyethene. New Claim 38 has also been added, dependent from Claim 16, reciting a similar limitation. Support for these amendments can be found, at least, in the specification on page 13, lines 12-14. No new matter has been added.

Interview Summary

Applicants gratefully acknowledge the courtesy shown by the Examiner towards Applicants' undersigned representative during a personal interview on December 17, 2003. During the interview the currently pending claims and the cited art were discussed. However, agreement was not reached.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-7, 16-22, 29, 30, and 34 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Applicants' disclosure, Barrocas (U.S.P.N. 4,232,179), Toms (U.S.P.N. 5,417,679), Bruggeman (U.S.P.N. 5,721,295), Cargill (WO94/07941), and Dupont (WO95/29200). The Examiner asserts that the

specification, Toms, and Cargill admit that it is known to produce components for absorbent articles from polyethene derived from non-renewable materials. The Examiner also argues that the instant specification, Toms, and Cargill disclose that the manufacture of absorbent articles from polyethene is known. Accordingly, the Examiner surmises that the novelty of the present invention is the use of renewable raw materials in the manufacture of polyethene for use in absorbent articles or packaging materials. The Examiner argues that the instant specification, Bruggeman, Cargill, and Dupont disclose that it is desirable to make environmentally friendly materials or packages by using films, materials, and components used from renewable raw materials. Thus, the Examiner concludes it would be obvious to make absorbent articles from polyethene from a renewable raw material. This rejection, to the extent that it applies to the claims, as amended, is respectfully traversed.

Initially, Applicants note that independent Claim 1 has been amended to recite that the polyethene produced from renewable raw material consists of 100% polyethene. Dependent Claim 38 was also added mirroring such a recitation. Independent Claim 16 recites that ethene, used to make polyethene, is produced from a renewable raw material.

In order to establish a case of *prima facie* obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation to modify the reference or combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art reference(s) must teach or suggest all of the claim limitations. See M.P.E.P. § 2142. Applicants respectfully submit that these criteria have not been met.

Applicants respectfully submit that none of the cited references, either alone or in combination, disclose or suggest all of the elements of the presently claimed invention, *i.e.*, the use of polyethene made from renewable raw materials to make absorbent articles and packaging materials. Barrocas merely discloses a process for preparing ethene from ethanol and states that ethene has become an essential raw material in the plastic industry. There is no connection between the Barrocas publication and absorbent articles, much less making environmentally friendly versions of a major landfill article. Moreover, the cited publications and the present invention solve different problems. Toms, Bruggeman, Cargill, and Dupont relate to the use of a **biodegradable** polymer material in absorbent products instead of a **non-biodegradable** material (like polyethene). These publications refer to the problem with disposing the absorbing products in an environmentally friendly way, which is solved by using biodegradable material in the products. The object of the presently claimed invention is to produce absorbent articles and packages in an environmentally friendly way by not using non-renewable sources of material. This problem is solved by using renewable material for producing the polyethene that is used in manufacturing the absorbent product and packages.

The Examiner argues that the cited documents disclose "that it is also known and desired to create environmentally friendly diapers or packages by using films, materials, and components produced of renewable raw materials rather than non-renewable raw material." [Office Action, page 6, lines 4-6). However, the material chosen in the absorbent articles of the cited publications are chosen because they are **biodegradable**. This is disclosed in the text passages cited by the Examiner in the Office Action on page 6. The choice of **biodegradable** material, not material

from renewable sources, solves the problem with the handling of the articles after use in the cited publications.

The Examiner asks where the cited publications disclose that polyethene from renewable sources is undesirable. In Cargill, it is noted on page 1, line 37 to page 2, line 5, that "[c]urrently, films comprising polymers such as polyethylene, polypropylene.... are popular for their superior extrusion and film-making properties. However, these films are not biodegradable. Furthermore, these films are generally noncompostable, which is undesirable from an environmental point of view." The material in Cargill should be biodegradable - polyethene is **not** biodegradable and therefore is not a desired material. The person skilled in the art, reviewing Cargill, would **not** choose polyethene at all, even from renewable material, because polyethene, **regardless of whether it is made from renewable material (e.g., ethene from ethanol) or not**, is substantially non-biodegradable.

Toms discloses in col. 1, lines 48-50, that there is a need to replace polyethene backsheets. Bruggeman refers to water-soluble and/or water-swelling polymers. Because polyethene is not such a polymer, Bruggeman does not mention polyethene. Additionally, the polymers in Bruggeman should also be biodegradable. Accordingly, polyethene is of no interest to Toms or Bruggeman.

Further, the Examiner asserts on pages 7-8 of the Office Action that, "materials based on renewable materials, are, at least in theory, biodegradable, i.e. that polythene of renewable materials would be biodegradable." The sugar-based polymer disclosed in Dordick '421 has sugar incorporated into the polymer backbone (see, e.g., abstract), rendering it biodegradable. This is not the case with polyethene. Applicants are unable to discern that the text the Examiner refers to on

page 7 of the Office Action says that polyethene produced from a renewable material should be biodegradable, even theoretically. Additionally, Applicants are unclear as to how the paragraph bridging page 3 and 4 in the present specification discloses that materials based on renewable raw materials are, at least in theory, biodegradable. Polyethene from renewable raw materials and from non-renewable raw materials has the same structure. Absent some explicitly disclosed structural modification (such as a modified sugar backbone in the polymer disclosed in Dordick), there is no reason to believe that polyethene from renewable sources is any more biodegradable than polyethene from non-renewable sources.

All of the cited publications, other than the present specification, relate to biodegradable material, some of them intend to replace polyethene. The Examiner seems to be stating that all material made from renewable material is biodegradable. The only publication mentioning biodegradable renewable materials is Bruggeman. However, polyethene is not mentioned anywhere in this publication. Polyethene is considered to be a substantially nonbiodegradable material regardless of the material from which it is made.

In summary, all of the cited publications refer to different solutions to waste problems associated with disposable absorbent articles - specifically, these publications deal with solving the problem of waste after use. The presently claimed invention deals with solving problems during production. Moreover, the cited publications teach away from using polyethene entirely, rather than disclosing or suggesting the use of polyethene produced from renewable raw materials. Accordingly, Applicants respectfully submit that the presently claimed invention is not

obvious over the cited publications. Withdrawal of this rejection is respectfully requested.

Claims 35-37 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Applicants' disclosure, Barrocas, Toms, Bruggemann, Cargill, Dupont, Sitnam (USPN 5,185,009), Klemp (USPN 5,176,669), Bednar (USPN 5,404,999), and Yoo et al. (USPN 5,461,093). Applicants' disclosure, Barrocas, Toms, Bruggemann, Cargill and Dupont publications are applied as discussed above. The Sitnam, Klemp, Bednar, and Yoo et al. publications allegedly disclose that "polyethylene can be biodegradable and it is also known and desired to create environmentally friendly diapers and packages by using films, materials and components products of such." This rejection, to the extent that it may apply to the claims, as amended, is respectfully traversed.

Initially, Applicants note that independent Claim 35 has been amended to recite that the polyethene produced from renewable raw material consists of 100% polyethene. Applicants' arguments from above concerning the Barrocas, Toms, Bruggemann, Cargill, and Dupont publications are equally applicable to this rejection. Applicants respectfully submit that the polyethene (100% polyethene) of the presently claimed invention is used because it is produced from a renewable material. The polyethene in the Sitnam, Klemp, Bednar, and Yoo et al. publications is not made from renewable material. These publications also do not disclose or suggest that **any** polyethene is biodegradable.

Bednar discloses a liner bag, which could be made of polyethene, which may contain an absorbent material suitable for collecting and containing waste material.

Bednar also notes that any component of the bag may be made of a biodegradable product. See col. 8, lines 53-54. No example of any such material is given. This document does not disclose or suggest an absorbent article comprising polyethene made from a renewable resource, wherein the polyethene consists of 100% polyethene as required by the presently claimed invention.

Klemp discloses a disposable diaper, in which polyethene could be used. However, the polyethene is modified to create a biodegradable polyethene with starch, carbon, or other non-synthetic additions intended to promote biodegradability. For example, 5-20% starch is used together with polyethene. See col. 4, lines 17-25. The content of the starch is the reason why the polyethene is now considered to be biodegradable. Klemp does not disclose a polyethene made from a renewable resource which consists of 100% polyethene or the use of such polyethene in an absorbent article.

Sitnam discloses a biodegradable diaper. Polyethene is used in a preferred embodiment. However, a **biodegradable** polyethene is used in the diaper, not polyethene produced from a renewable resource, which consists of 100% polyethene. The polyethene produced in Sitnam is likely of the type used by Klemp above and Yoo et al. discussed below.

Yoo et al. concerns a biodegradable modified polyethene composition chemically bonded with starch. See col. 3, lines 5-11. The polyethene is not biodegradable in itself, but rather only in combination with the starch. It can be seen in the Examples that when no starch is used in the composition, there was no biodegradability – that is, polyethene consisting of 100% polyethene is not biodegradable.

Thus, the cited publications show that conventional polyethene is not in itself biodegradable. Rather, *modified* polyethene can be biodegradable, e.g., by incorporating starch into the polyethene. Conventional polyethene is not biodegradable. Further the presently claimed invention produced polyethene from a renewable material, in contrast to the cited publications.

The purpose of the presently claimed invention is to produce an absorbent article in an environmentally friendly way using renewable material in order not to consume non-renewable resources. The cited publications concern environmental absorbent articles which breakdown after use (biodegradable). This is completely different from the presently claimed invention.

Accordingly, the presently claimed invention is not disclosed or suggested by the cited publications, either alone or in combination. The presently claimed invention encompasses a novel approach to a major landfill problem, not previously considered by the absorbent article industry. Therefore the presently claimed invention is not obvious. Withdrawal of this rejection is respectfully requested.

Conclusions

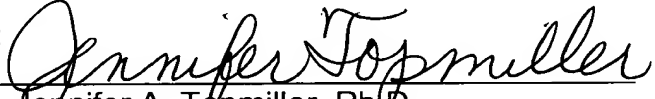
From the foregoing, further and favorable consideration of the subject application in the form of a Notice of Allowance is respectfully requested and such action is earnestly solicited.

If there are any questions concerning this amendment, or the application in general, the Examiner is respectfully requested to contact Applicants' undersigned representative by telephone so that prosecution may be expedited.

Respectfully submitted,

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